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INCOME AND WEALTH OF HOUSEHOLDS WHO OPERATE U.S. FARMS

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The two most common financial indicators of household well-being are net income and net worth. For the average farm operator household, the relative importance of farming as captured in these two financial indicators is distinctly different. Farm income is a small share of the farm household's income, whereas farm assets dominate the balance sheet of farm households, on average. Hence, to assess the financial well-being of farm households, we need to jointly consider the farm and nonfarm components of both income and net worth. Furthermore, we need to consider how the sources of income and wealth vary across diverse farm households and how they compare with trends in the general U.S. population.

Income of the Average Farm Operator Household[1]

The average farm operator household income in 2005 is forecast to increase by 2.8 percent over the 2004 level to $73,070 (table 1). In fact, farm operator household income has increased steadily every year since 2000. The farm portion of the household's income has increased significantly in the 2003-2004 period and is forecast to remain at about the same level in 2005. The farm share of household income is above 11 percent for 2003, 2004, and 2005F, which has not been the case since 1998. While this share of income coming from farming may seem surprisingly small, it does not seem small when you consider the size of most U.S. farms. Most farms are small, and even in a year of high farm income, small farm businesses may not be able to support a household. For example, nearly three-quarters of the nation's approximately 2 million farms gross under $50,000 and, on average, lose money farming. Hence, these small farms dominate the average statistics and bring down the average income from farming. In contrast, the remaining one-quarter of farms account for the bulk of the farm product (more than 90 percent), and have positive farm incomes in a typical year.

While the two are not synonymous, recent trends in farm household income from farming have mirrored the trend in sector-wide farm income. The sector net income includes farm operator household income as well as the income that goes to contractors, partners, and others with a stake in the residual income from farming. Farm sector income was at a record high in 2004 and is expected to decline slightly this year, but 2005 income is still expected to be higher than the 2003 level.

[1]Only principal farm operator households are considered here. More than 800,000 of the 2.1 million farms have more than one operator (USDA, NASS). For some multiple-operator farms, the operators are in the same household, e.g., husband-wife operators, and so all of the farm income is earned by a single household. Sometimes the multiple operators are in multiple households. In 2002, 20 percent of farms had more than one household that shared in the net income (USDA, NASS). That is up from 8 percent of households in 1988 (Ahearn, Perry, El-Osta). These junior operator households are not considered in our statistical population. We also do not account for the income of those entrepreneurial households who contract for the production of agricultural commodities, and thereby share in the risks of production. Currently, nearly 16 percent of agricultural product is under a production contract (MacDonald, et al.). Finally, we do not account for the income of those households that are farm landlords, and not farm operators, even though they continue to be major beneficiaries of government payment programs. There are nearly 1.5 million landlords that do not operate farms, and their numbers have been increasing by about 2 percent per year for the last 30 years.

The remaining 89 percent of the average farm household's income in 2005 is forecast to come from off-farm sources. Economists have long recognized that relatively high off-farm wage rates have contributed to the pull of labor off farms. In 2003, the latest year for which we have detailed information on the various off-farm income sources, wages and salaries accounted for 62 percent of all off-farm income (figure 1). Operators earned more than half of the wages and salaries of the household (57 percent), spouses earned 31 percent, and other household members earned the remaining 12 percent in 2003. Operators and spouses most commonly work either full-time off the farm or not at all, but some do work part-time off the farm. The other component of earned off-farm income is from an off-farm business, which accounted for about 14 percent of all off-farm income in 2003. On average, about one-quarter of the off-farm income is from retirement and property income, the so-called "unearned" sources of income. Social Security and other retirement programs contribute about 46 percent of unearned income; dividends and capital gains together contribute another 23 percent; with the remainder from a variety of other sources.

Although farm income accounts for a small share of the average farm operator household's income from all sources, the annual variation in income from all sources often follows the annual variation in farm income because the nonfarm sources of income are generally more stable over time. In addition, the small share of household income contributed by farming does not correspond with where the household allocates its work time. Most farm households allocate a significantly greater share of their work time to farming than their farm share of earned income. To understand why this is likely the case it is important to recognize that our measure of household income is largely a cash concept; the only noncash item is for a depreciation expense. Noncash items like the value of the farm dwelling, unrealized capital gains on farm assets, tax advantages, or even the amenities associated with the farming lifestyle are positive returns from farming that are not captured in our measure of income.

Farm Operator Household Income by Commodity Specialization**.** It is common for year-to-year changes in farm operator household income to be especially evident when farms are categorized by the commodity in which they specialize. This is because commodity value of production is often a major source of annual variation of net farm income, in contrast to the relative stability of income from off-farm sources. In addition, government payments are associated with the production of specific commodities, either currently or in the future, and payments fluctuate annually. As mentioned in other presentations at this forum, 2004 was an exceptional year in terms of production and prices for many commodities, as well as for government farm payments. While both crop and livestock value of production are forecast to be down in 2005, relative to 2004, they are still among the highest values ever for the sector. In addition, government payments are forecast to be at a record level in 2005.

The farm income of farms that specialize in corn or soybeans increased about 8 percent from 2003 to 2004 (figure 2). The 2005 farm share of income for these farm households is expected to be down considerably, 22 percent for soybean farms and 39 percent for corn farms. In contrast to farm households which specialize in corn and soybeans, farm households that specialize in wheat saw their farm income decline from 2003 to 2004 and then increase in 2005, both by about 8 percent. The farm share of household income for those that specialize in cotton or rice increased in both periods, 2003-04 and 2004-05. The increase in the farm income of rice specialists was especially remarkable; the 2003-04 increase was 51 percent and then is expected to nearly double from 2004 to 2005. Rice farmers have off-farm incomes below the average for all farm households. However, their very high farm income gives these households, along with cotton farm households, the highest average household income among all crop and livestock specialists during the 2003-2005 period. The farm income of households that specialize in peanuts declined in the 2003-2004, but a significant increase is expected for 2005.

The average farm income of households that specialize in beef cattle is generally the lowest of all of the farm specialties. In 2004, the average farm income was even negative and it is expected be a small positive amount in 2005, i.e. only $294. The off-farm income of households that specialize in beef cattle is above average and is greater than the total household income of all U.S. households. Most forms of beef cattle production is not labor intensive, allowing households to work off the farm. In contrast, the significant labor requirements of dairy production limit the ability of farm households to work off the farm. After nearly doubling their farm share of income from 2003 to 2004, dairy farm income is expected to decline in 2005. Poultry is the only livestock specialty that had increases in the farm share of household income for both the 2003-2004 and the 2004-2005 period. Farm households that operate hog farms have the highest household income of all the livestock specialties; the 2004 year was an especially high farm income year for households that specialize in hog production.

<u>State Estimates of Farm Operator Household Income</u>. For the first time in recent years, the sample size on USDA's 2003 Agriculture Resource Management Survey (ARMS) is large enough to allow for statistically reliable estimates of the average household income for farm operators in 15 states **(figure 3).** These 15 states generally have high cash receipts from farming. The average household income for all farm operator households in 2003 was $68,506, with 11.2 percent of that income from farm sources. In the same year, California had the highest average household income of $126,971, with 29.0 percent from farm sources. Both the average farm and off-farm household incomes in California were the highest in the nation. Iowa and Nebraska had the next highest average farm income (about $20,000), but those two states had the lowest off-farm income of all the states. The average farm operator household in Nebraska had the highest share of income from farming of the 15 states, but it was still less than half of the total, at 34 percent. Farm operator households in Nebraska averaged only $39,611 in off-farm income, and Iowa averaged $49,474. In spite of their relatively high farm income, the low off-farm income of operator households in Nebraska kept their total household income below the average of all U.S. farm households, in contrast to Iowa's which was above average.

Because these 15 states are major agricultural states, most of them have an above average share of their household income from agriculture. The five states that had average farm incomes below the national average in 2003 (and that farm income represented a below average share of the total household income) were: Texas, Indiana, Missouri, Florida, and Washington. Indiana also had a relatively low average off-farm income, so out of the 15 states, Indiana had the lowest farm operator household income in 2003. Like Indiana, Minnesota had a relatively low average off-farm income, so it, too, had below average income from all sources. The farm households in Texas, Florida, and Missouri all had relatively high off-farm incomes, of at least $67,000. The remaining 3 Southern states in this group of 15--Arkansas, North Carolina and Georgia--all had above average income from both farm and off-farm sources. Farm operator households in Illinois, Kansas, and Wisconsin had household incomes above $70,000, with the farm share above the national average, but the off-farm share below the national average.

<u>Farm Operator Household Income Compared to All Households, U.S. and State</u>

As has been the case for years, the average U.S. farm operator household has had higher average income than the average U.S. household. The latest estimate for U.S. households is for the calendar year 2003 when the average was $59,067. The level of household income for farm operator households has exceeded the average income of all U.S. households by at least 10 percent for the 2001-2003 period. In 2003, the average farm operator household income was 116 percent of the average U.S. household. Given the increases in 2004 and 2005 farm income, we would expect this differential to widen further as the U.S. household estimates are updated.

For the 15 states for which the 2003 sample allows us to estimate statistically reliable state-level estimates, we have found that in all but one state, farm operator household income was higher than the statewide average of all households (figure 4). The exception was in Minnesota where the average farm household income in 2003 was $65,316, compared to $69,539 for all Minnesota households. The greatest differential in household income for the farm operator household and all state households was in California where farm households had average incomes of 90 percent more than the state's average. In fact, the 15 agricultural states for which we have reliable data in 2003 generally had a significantly greater differential between the farm operator households and all households in the state than was true for the U.S. in general. This is because the farm operator households in these states generally had higher incomes than the farm households in the other states while all households in these 15 states generally had incomes below the national average. For example, farm operator households in Arkansas averaged $71,284 in income in 2003, but all Arkansas households averaged about $45,634. Farm households in Arkansas had 56 percent more income than all Arkansas households in 2003. Similarly, North Carolina farm households had 60 percent more income than all households in North Carolina in 2003.

Net Worth of Farm Operator Households

Although household income is the most common indicator of farm operator household well-being, net worth (i.e., wealth) is a critical indicator of well-being that is often overlooked. Net worth is the difference between assets and liabilities. A strong net worth is often the result of successive years of strong incomes. While farm operator households have an income which is about 11 percent greater on average than all U.S. households, their net worth is about 8 times greater than that of the average U.S. household. In 2003, the average net worth of farm operator households was $663,646, with the farm assets accounting for 73 percent of household net worth.

Although ERS does not attempt to forecast farm household net worth, the trends in the farm component of farm net worth for 2004 and 2005 are expected to follow the trends in farm sector assets and debt. Farm sector assets increased 10 percent from 2001 to 2003, and are forecast to increase another 9 percent from 2003 to 2005. Historically, because farming is generally land intensive, farm real estate has dominated the balance sheet of most farm households. In 2001, farm real estate accounted for 80 percent of total farm assets and its share is expected to inch up to 82 percent by 2005. Total farm debt has been increasing every year since 2001, as well. However, the rate of increase in debt trails the rate of increase in assets, so that debt-to-asset rates for the sector are expected to decline from 14.8 percent in 2001 to 14.2 percent in 2005.

A useful approach for simultaneously assessing the income and net worth of farm households relative to all U.S. households is through a relatively new economic well-being indicator. This indicator categorizes farm operator households into one of four groups based on the income and net worth position of the farm household relative to the median income and net worth of all U.S. households (Covey, et al.). In 2003, only 4.9 percent of farm operator households were in the lower income/lower wealth category, relative to U.S. households. Another 2.9 percent of farm operator households were classified as higher income/lower wealth. Given the significant wealth of farm households it is not surprising that less than 8 percent of farm households were in the two categories with lower wealth positions. (By definition, 50 percent of U.S. households would be in these two groups combined.) The largest group was the category of higher income/higher wealth, in which 51.2 percent of farm households were classified. Finally, 41.0 percent of farm households were in the lower income/higher wealth class relative to all U.S. households. The majority of these households are operators of the very smallest farms, and many are retired or have a major occupation other than farming.

The Well-Being of Farm Operator Households with a Special Policy Interest

We know that average statistics based on aggregations of all farms can mask important differences among subgroups of farm operator households. The approximately 2 million farms and the households associated with them are extremely diverse. Diversity is evident by examining characteristics by the size of farm (i.e., the standard sales class groupings) or by the more complex ERS typology which considers the occupation of the principal operator and sales of the farm. Some of those subgroups of farm operator households may be of special interest for particular policy goals. For example, the policy goals that are focused on managing and marketing agricultural commodities are not highly relevant to approximately half of U.S. farm operator households who operate very small residential farms. However, three subpopulations of farm operator households of relevance for various policies are:

- Limited resource farm operator households
- Farm operator households that receive government payments
- Farm households that operate the large farms that account for the bulk of U.S. food production

By definition, the limited resource farm households and the large farm households are distinct groups. However, the households that receive government payments are not distinct from the other two policy-relevant groups. Many large farms receive government payments and even some limited resource farmers receive government payments. In 2003, 35 percent of limited resource farmers received some type of government payment, most commonly direct payments. The average government payment received by the limited resource farmers that participated in programs in 2003 was $5,169. Farm households that operate large farms (family farms with sales of $250,000 or more) were about twice as likely to receive payments in 2003 (73 percent) as limited resource farmers. Their average government payment for those that participated was $47,602.

Limited Resource Farm Operator Households

A subset of farm operator households has chronic low income. Fortunately, this group of low-income farm households is a much smaller segment of the farm population than it once was. Consequently, their income levels do not dominate the average statistics. In 2003, about 10 percent of farm operator households, or 199,987 households, were classified by USDA as limited resource farmers. The current USDA definition of a limited resource farm household in 2003 is one with sales of under $102,400 in each of the two previous years and household income at or below the national poverty level for a family of four, or household income less than 50 percent of the county median household income in each of the two previous years.[2]

It should be noted that past definitions of limited resource farmers were more restrictive and included a maximum farm asset cap. If a farm asset cap of $150,000 (which is well above the U.S. household median net worth) is included in the definition, the number of farm households that are classified as limited resource farm households is much less. Sixty-eight percent of the households classified as limited resource farmers under the current more liberal definition have assets above $150,000. In fact, many of these households reported that they were retired, so opportunities to enhance farm production income may not be a feasible goal of the household.

On average, limited resource farm households lost $5,138 farming in 2003. In contrast to other farm households, they had relatively low off-farm income, which averaged $11,343. In more than three-

[2] In practice, as a cut-off for household income, we use the median *state* household income rather than the median *county* household income.

quarters of these households neither the operator nor the spouse worked off the farm. This compares to only about one-third of all farm households where neither the operator nor spouse worked off the farm. The major source of their off-farm income was from Social Security programs, which is consistent with a large share reporting that they are retired. Their total household income in 2003 was only $6,206. So, while limited resource farms comprise a much smaller group of farm households than they once did, limited resource farmers, many aged, persist today and continue to be of interest to policy makers as a result of their low household incomes.

Farm Operator Households that Receive Government Payments

The group of households that receive farm payments is policy-relevant because payment levels are often scrutinized. There are a variety of government farm programs with varying and multiple objectives in which farm households participate. In 2003, 39 percent of U.S. farms received payments from one or more Federal farm programs. The most common payment received in 2003 was direct payments; 22 percent of farms received direct payments. Other major Federal programs provided the following payments: counter-cyclical payments (to 9 percent of farm households), milk income loss payments (to 3 percent of farm households), disaster and emergency assistance payments (to 11 percent of farm households), and Conservation Reserve Program payments (to 13 percent of farm households).

Receipt of government payments is related to farm size. As farm size increases, the share of farms that receive payments increase, regardless of program type, until farms reach $250,000 or more in sales, at which point participation declines (figure 5). The decline in participation for the large farms is associated in large part with farm specialization. The historical design of the programs means that certain specialties, like feed and food grain farms, are eligible for payments, and these specialties are less likely to be in the largest farm categories.

The average payment increases as farm size increases, too, since most of the programs are linked to quantities produced currently or in the past. However, there is also an absolute payment limitation that each person (which can be a human being or a business organization) can receive from the government. Payment limits do not exist for all programs and, when they exist, vary by program. The per person limit for direct payments is $40,000, the per person limit for counter-cyclical payments is $65,000, and the per person limit for marketing assistance loan benefits[3] is $75,000. Persons, or entities, can be live human beings or business organizations, but each human being is limited to receive payments, or partial payments, from only 3 entities. Therefore, the effective absolute payment limit of a live human being is currently $360,000 per year.

The recent *Report of the Commission on the Application of Payment Limitations* estimates that about 1 percent of all producers have payments reduced because of the current payment limits. Although the average payment increases with farm size, the share that payments are of gross farm income decreases with farm size. Gross farm income increases significantly more than payments with increases in farm size. For example, for the smallest farms of $10,000 or less in sales that received payments, their average payments were $2,164 which was 34 percent of their gross cash income. In comparison, farms with $1 million or more in sales who participated in programs averaged $81,836 in government payments in 2003, but that represented only 5 percent of their gross cash income (figure 5). Farm operator households who receive government payments have higher household incomes than both the average U.S. household and farm operator households who do not receive payments.

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[3] Marketing assistance loan benefits consists of loan deficiency payments, marketing loan gains, certificate exchange gains, and forfeiture gains. The latter two benefits are not subject to payment limits.

Farm Households that Operate the Largest Farms

The polar opposite of a limited resource farm household is the farm household that has a large agricultural resource base. There is a policy interest in focusing on the financial sustainability of the households associated with the largest farms because they account for the bulk of our agricultural product. The 7.2 percent of farms with sales of $250,000 or more, commonly called commercial farms, accounted for 68 percent of the value of production in 2003. The income and net worth of commercial farm operator households is substantial. First, these are the farms that are making significant income from farming, in contrast to farms with sales below $250,000, the so-called residential and intermediate farms (figure 6). Farms in the $250,000-$499,999 sales class earned $62,327 from their farm alone and received another $40,078 from off-farm sources for a household income of more than $100,000. The next two largest sales classes averaged $143,313 and $334,646, respectively, in household income in 2003. Obviously, these households had a successful year in 2003, but their very high net worth position indicates that it is likely that they have had many successful years in the past, as well.

By linking the Censuses of Agriculture over time from 1978-1997, we can verify that the largest farms in the sector are relatively secure. Farms can be classified as "survivors" during a 5-year period if they are included in censuses at the beginning and the end of the time period. We know that mid-sized and large farms have higher survivor rates than do small farms (figure 7) during the 1978-1997 period. We also know that the larger the farm, the greater is the likelihood that it will expand in size from one census period to the next (figure 8). Hence, the empirical evidence from longitudinal studies and current financial analysis supports the belief that the farms responsible for the bulk of U.S. food and fiber are in a strong position to continue to meet our needs into the future.

Summary and Conclusions

The well-being of farm operator households must be viewed in a relative sense. Whether the well-being of farm operator households is evaluated relative to the recent past or compared to all current U.S. households, farm operator households today are in a secure financial position. The strong market for agricultural commodities, in addition to government payments, has left farm operator households in a strong income and net worth position through 2005. The farm share of operator household income is in excess of 11 percent. In addition, off-farm income of operator households has continued to increase during the recent period. Diversification in sources of income brings stability to the sector as a whole. In addition, to a certain extent, the demands of consumers are best met by a diverse farm structure organized to produce a variety of products, including niche product, such as organic or branded products. However, the bulk of commodities come from a small share of the 2 million farms. The majority of farms are very small farms, for whom farm production may very well be secondary to the rural lifestyle they produce for themselves and their families.

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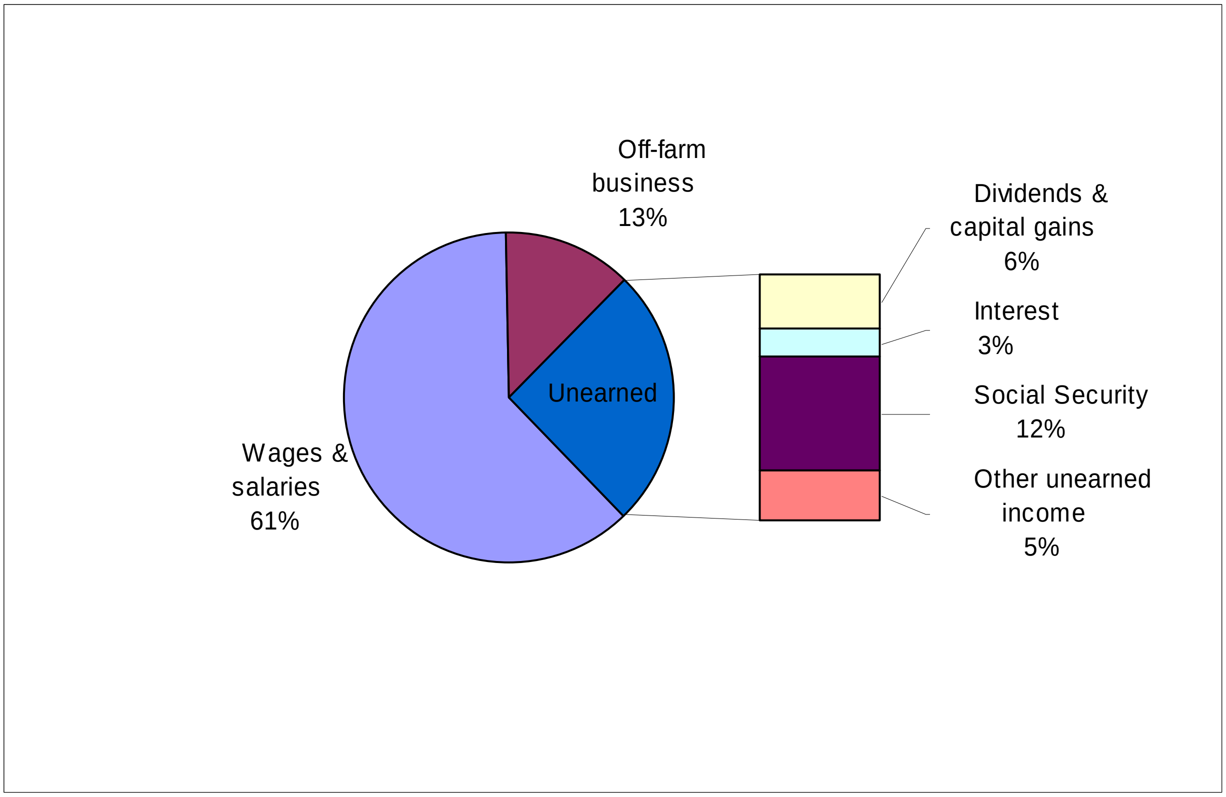
Table 1. Average Income of Farm Operator Households, 2001-2005F

Item	2001	2002	2003F	2004F	2005F
	Dollars per farm				
Net cash farm business income	14,311	11,331	14,569	15,458	15,361
-Less depreciation	7,609	8,189	7,346	na	na
-Less wages paid to operator	932	758	682	na	na
-Less farmland rental income	477	621	592	na	na
-Less farm income due to other household(s)	1,083	1,248	1,401	na	na
	Dollars per farm operator household				
Equals adjusted farm business income	4,211	516	4,547	na	na
-Plus wages paid to operator	932	758	682	na	na
-Plus net income from farmland rental	na	na	na	na	na
-Plus other farm-related earnings	396	2,199	2,411	na	na
Equals farm earnings of the operator household	5,539	3,473	7,640	8,236	8,099
-Plus off-farm income of the operator household	58,578	62,285	60,865	62,858	64,971
Equals average farm operator household income	64,117	65,757	68,506	71,095	73,070
	Dollars per U.S. household				
U.S. average household income	58,208	57,852	59,067	na	na
	Percent				
Average farm operator household income as a % of U.S. average household income	110.2	113.7	116.0	na	na
Average operator household farm earnings as % of average operator household income	8.6	5.3	11.2	11.6	11.1

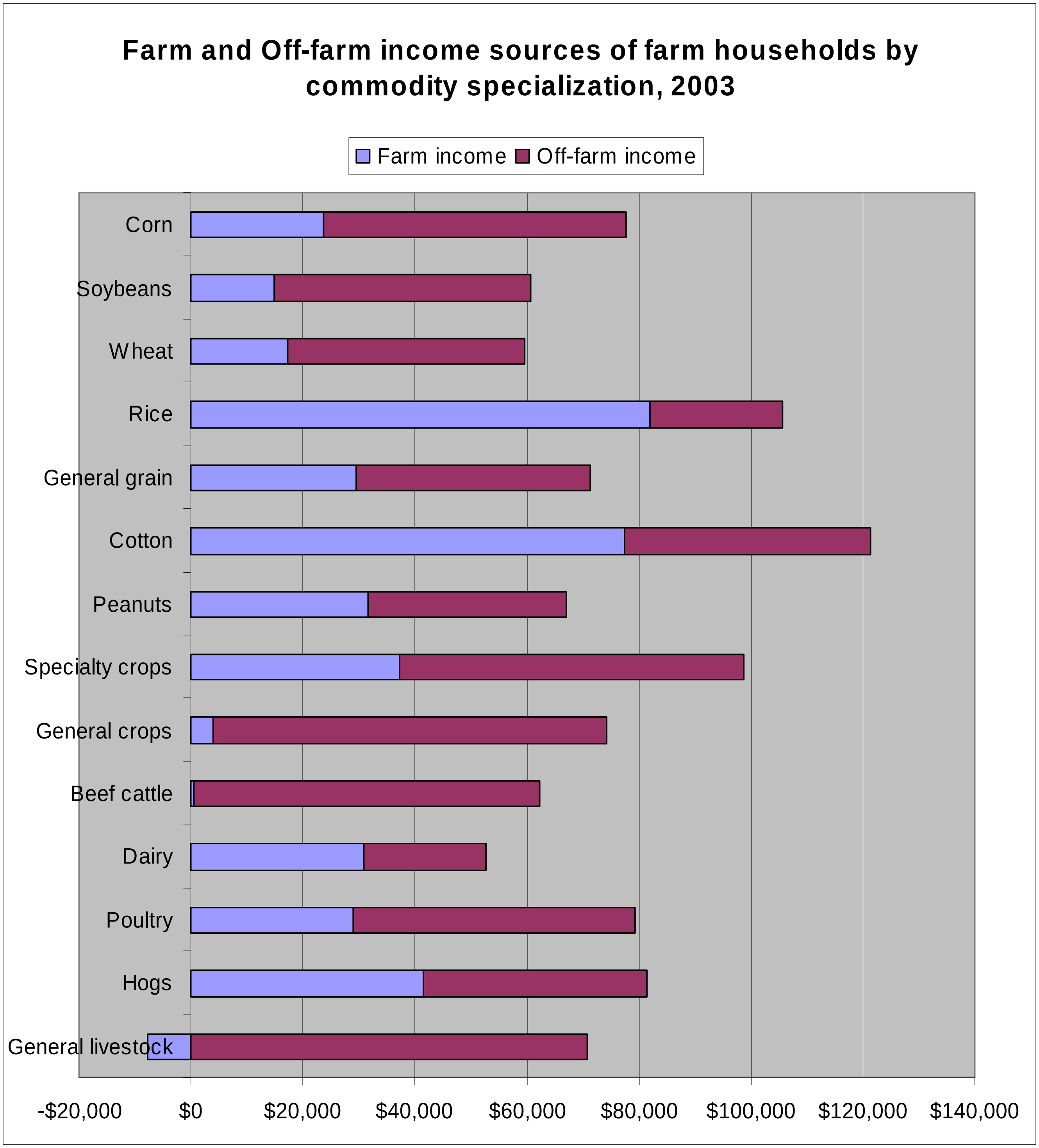
P = Preliminary. F = forecast. n.a. = not available.
Source: USDA, ERS, Farm Income briefing room. (http://www.ers.usda.gov/Briefing/FarmIncome/)

Figure 1. Sources of Farm Operator Household Off-farm Income.



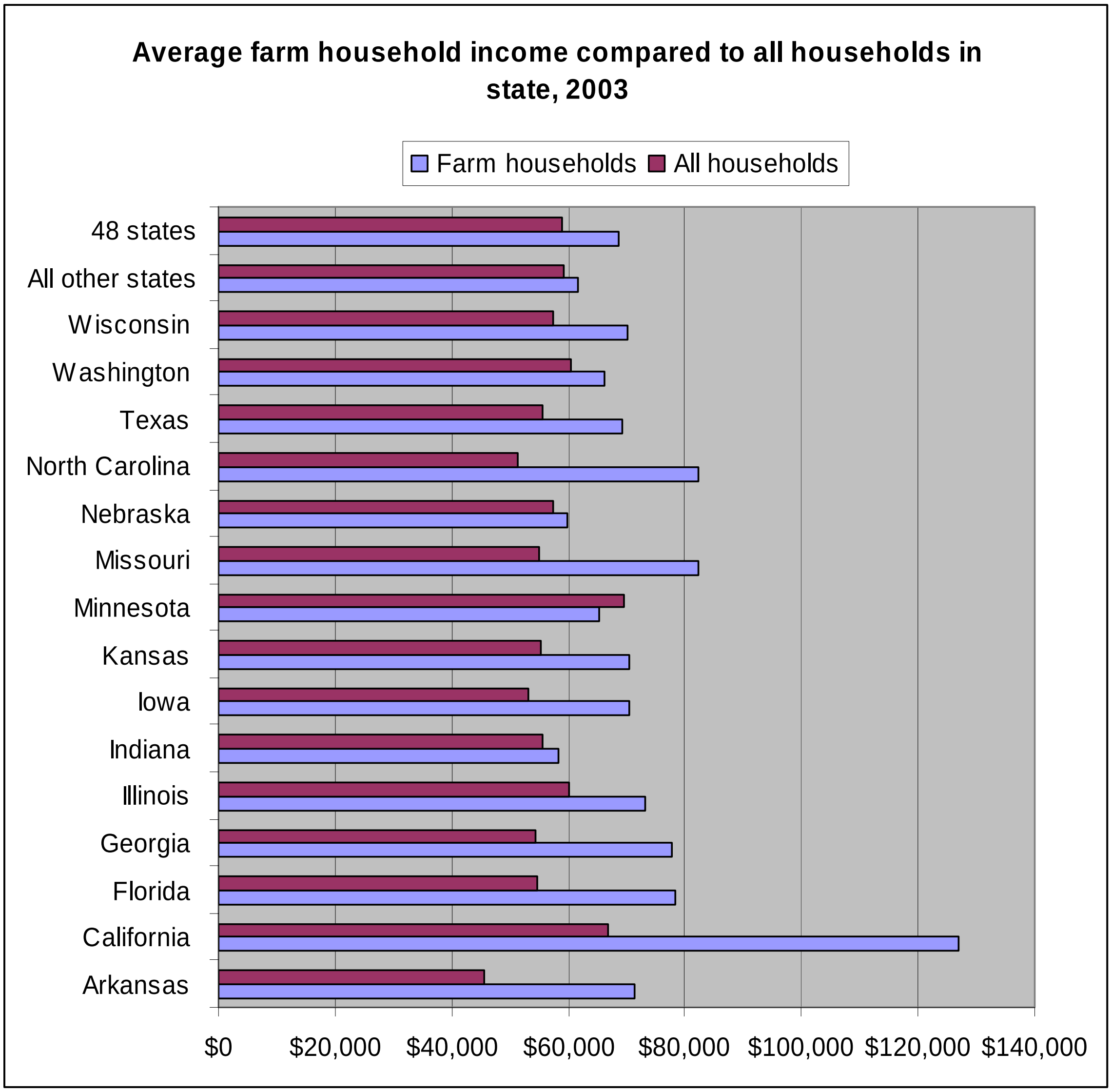
Source: USDA, Agricultural Resource Management Survey, 2003.

Figure 2.



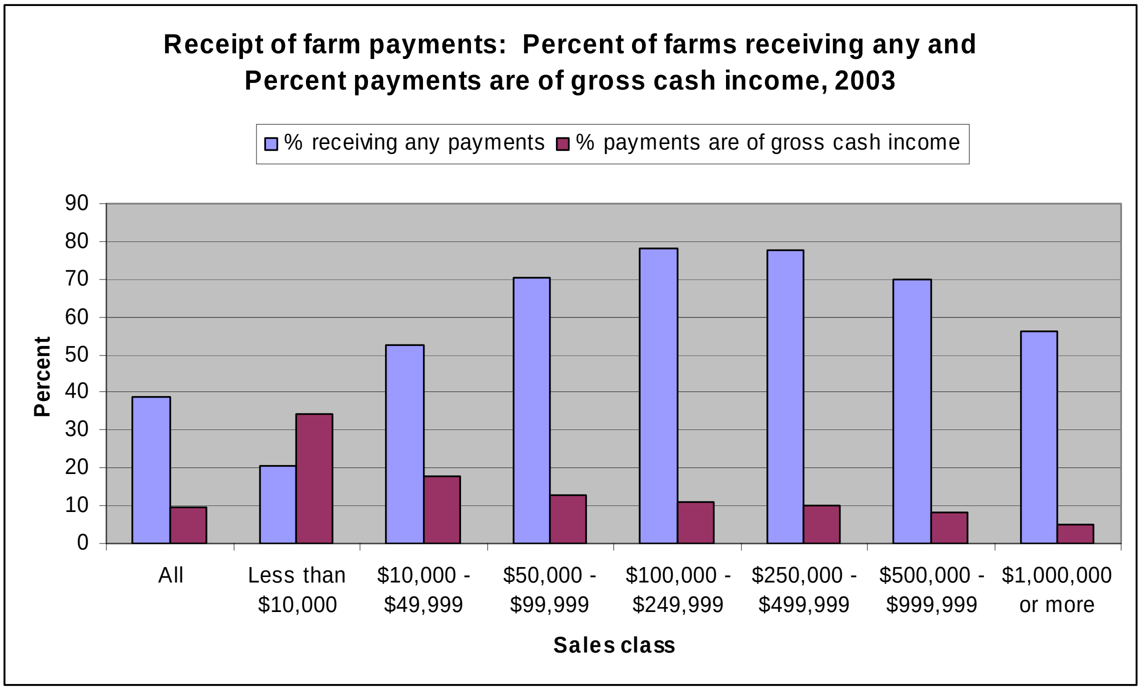
Source: USDA, ARMS, 2003.

Figure 4.



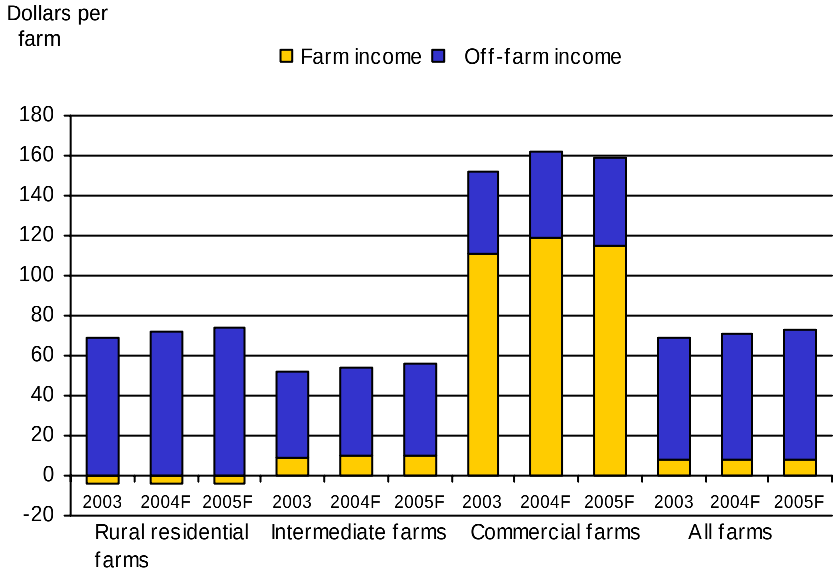
Source: USDA, Agricultural Resource Management Survey, 2003 and U.S. Census Bureau, Current Population Survey, 2004 Annual Social and Economic Supplement

Figure 5.



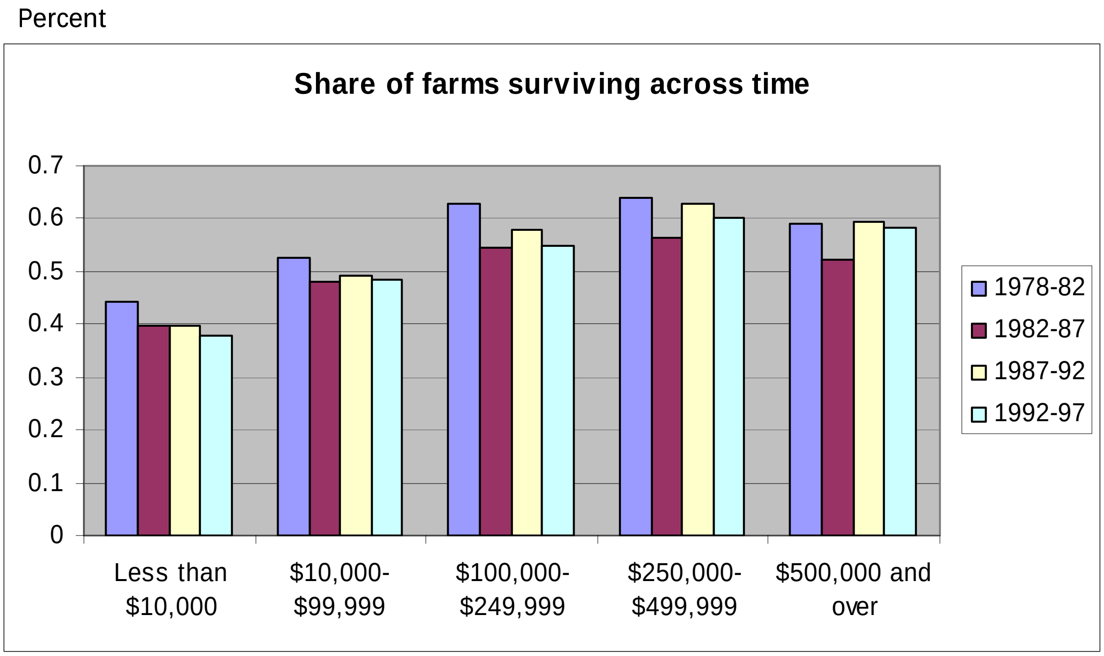
Source: USDA, Agricultural Resource Management Survey, 2003.

Figure 6. Average farm and off-farm income for Rural Residential, Intermediate, and Commercial Farm Households, 2003-2005.



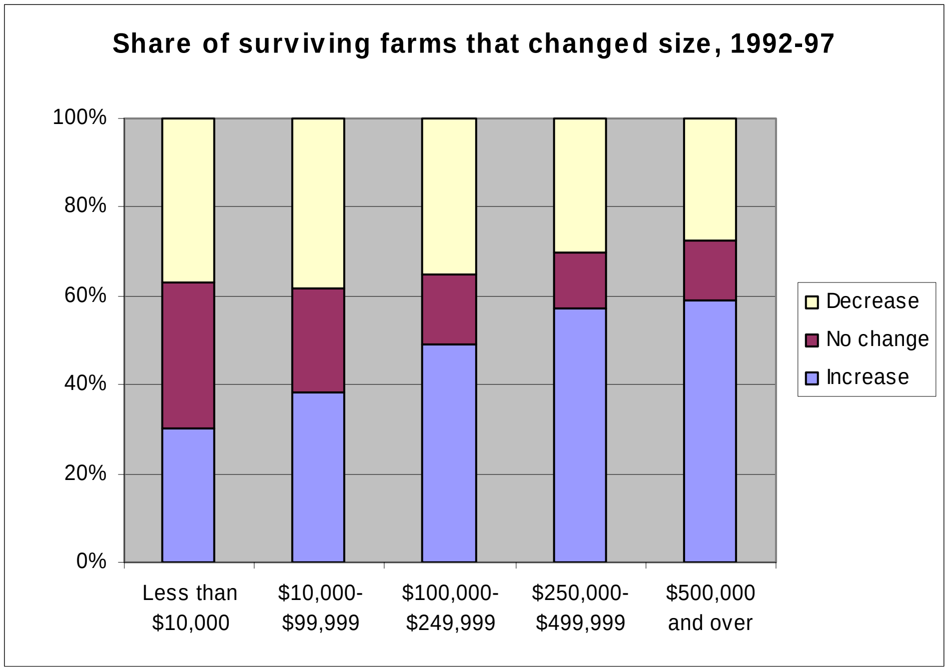
Source: USDA, Agricultural Resource Management Survey, 2003.

Figure 7.



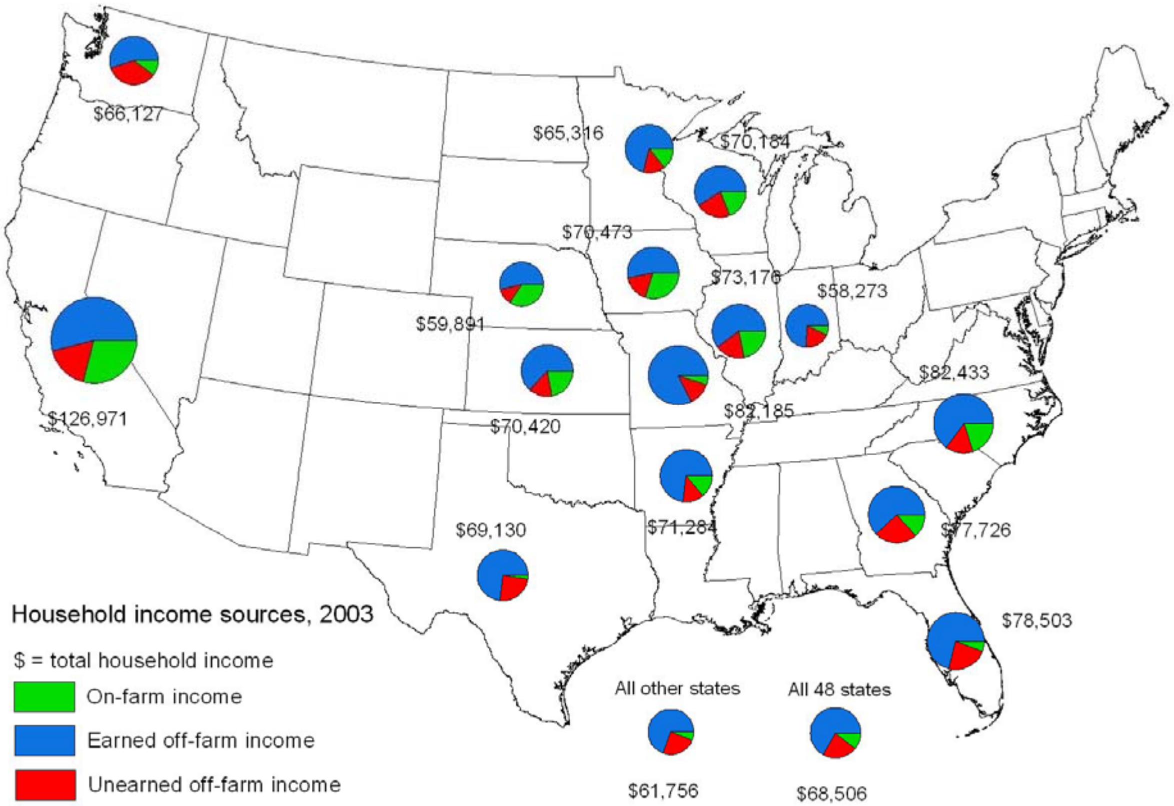
Source: Censuses of Agriculture.

Figure 8.



Source: Censuses of Agriculture.

Figure 3. Sources of farm operator household income for 15 agricultural states, 2003.



Source: USDA, Agricultural Resource Management Survey, 2003.